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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,502	02/12/2004	Leopoldo Alarcon	39700-601001US/NC39894US	3668
64046 7590 06/21/2010 MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C ONE FINANCIAL CENTER BOSTON, MA 02111				
EXAMINER GONZALEZ, AMANCIO				
ART UNIT		PAPER NUMBER		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/776,502

**Applicant(s)**

ALARCON ET AL.

**Examiner**

AMANCIO GONZALEZ

**Art Unit**

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**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 10-23 and 41-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 10-23 and 41-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-3, 5-8, and 11-13 filed on 03/29/2010 have been fully considered but are moot in view of the new ground of rejection.

Applicant's arguments with respect to claims 14-23 and 41-54 have been fully considered but are not persuasive. Said arguments raise the issue that neither Bhagwat nor Leung discloses or suggests at least the following feature of claim 1: "wherein a global address of the first network access entity is not known to the mobile entity." The Applicant further points out that independent claims 14 and 41 include the above noted feature of claim 1, therefore suggesting that the same argument applies to said independent claims.

Bhagwat, as cited, (see col. 8 lines 65-67 through col. 9 lines 1-5 and col. 10 lines 43-47) clearly discloses the feature of claim 1 that concerns sending a message including information for identifying a first network access entity from a mobile entity to a second network access entity, wherein the message is configured to enable the second network access entity to direct traffic destined to the first network access entity. Although not cited, Bhagwat also suggest wherein a global address of the first network access entity is not known to the mobile entity (see col. 6 lines 66-67 through col. 7 lines 1-5, where Bhagwat discusses that an access point includes, as one of its main components, a Medium Access Control and Mobility Support Layer (MMS) that is responsible for controlling the access to the medium and registration of new mobile

devices that come into the range of the access point, the mobility protocol being independent of the physical media that connects a mobile device to an access point, hence suggesting that a global address of the first network access entity is not known to the mobile entity). Also, Leung, as cited, contrary to Applicant's assertion, clearly suggests that a global address of the first network access entity is not known to the mobile entity (see col. 7 lines 45-50). If for a mobile node that has roamed to a private network and its Home Agent a Mobile IP session may be established even though a care-of address is a private address rather than a public address, which reads on *global address*, it is obvious that it is not required that the mobile node knows the global address, i.e., public address of the visited network because since it is been registered in the private network through a care-of address, which a person skilled in the art would understand, is not a global or public address, but an internal address assigned by the private network to a roaming access terminal.

As a result, the argued features are written such that they read upon the cited reference(s).

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1-3, 5-8, and 10-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhagwat et al. (US 6651105 B1), hereafter "Bhagwat," in view of de Leung et al. (US 7599370 B1), hereafter "Leung," further in view of Takusagawa et al. (US 20030225892 A1), hereafter "Takusagawa."

Consider **claim 1**. Bhagwat discloses sending a message including information for identifying a first network access entity from a mobile entity to a second network access entity, wherein the message is configured to enable the second network access entity to direct traffic destined to the first network access entity (**see col. 8 lines 65-67, col. 9 lines 1-5, col. 10 lines 43-47**); and handing over a connection of the mobile entity from the first network access entity to the second network access entity (see col. 5 lines 39-45, and col. 8 lines 64-67, where Bhagwat discusses handoff between access points).

But Bhagwat does not disclose or particularly refer to wherein a global address of the first network access entity is not known to the mobile entity.

Leung, in related art, discloses wherein a global address of the first network access entity is not known to the mobile entity (*global address read on public address -*

see col. 7 lines 45-50, where Leung discusses enabling a Mobile IP session to be established between a Mobile Node that has roamed to a private network and its Home Agent, wherein the Mobile IP session may be established even though the care-of address is a private address rather than a public address, hence the mobile node not knowing the visited private network or foreign agent public address, since the mobile node communicates from the private network to the outside -public or global network domain- when the assigned private network care-of address is subjected to a Network Address Translator (NAT) traversal -see also col. 3 lines 53-59).

Therefore, it is obvious that a person of ordinary skill was aware that a global address of a first network access entity not being known to the mobile entity, as taught by Leung, was of common knowledge in the art at the time the invention was made, and would have it included in or applied to the claimed invention, or combined it with Bhagwat's teaching, thereby providing means for the purpose of carrying out, and maintain in an optimum manner, a Mobile IP session that could be successfully and efficiently established from a Mobile Node via a private IP address without requiring modifications to the Mobile Node or the encapsulation scheme for both the Mobile Node and the Home Agent, as discussed by Leung (see col. 3 lines 43-49).

But Bhagwat combined with Leung is silent on wherein the information identifying the first network access entity comprises at least one of a network identity associated with the first network access entity, an access point name, an identity associated with an access point through which the mobile entity was connected to the first network

access entity, and a link layer address of the mobile entity; or wherein the message is configured to enable the second network access entity to direct traffic to the first network access entity based on the information included in the message, wherein the information is mapped, at the second network access entity, to the global address of the first network access entity.

However, Takusagawa, in analogous art, suggests the aforesaid limitation (**see [0015]-[0028], where Takusagawa discusses the process involving a fast handoff of a mobile node from an access router to another).**

Therefore, it is obvious that a person of ordinary skill was aware that a process involving a fast handoff of a mobile node from an access router to another, in the way taught by Takusagawa, was of common knowledge in the art at the time the invention was made, and would have included it in, or applied it to, the claimed invention, or either combined it with Bhagwat's teachings as combined with Leung, thereby implementing a handover in and IP network provided by mobile communication services and a router thereof, as discussed by Takusagawa (**see [0002]**).

Consider **claim 2**. Bhagwat, as modified by Leung and Takusagawa, teaches claim 1; and Takusagawa further discloses fast binding update (see pars. 0110, 0111, and 0114).

Consider **claim 3**. Bhagwat, as modified by Leung and Takusagawa, teaches claim 2; and Leung further suggests checking whether the address is globally routable (see Leung: col. 4 lines 7-16, where Leung discusses that mechanism enables a Foreign Agent to encapsulate a registration request packet with the Foreign Agent care-

of address in the source IP address field; and when NAT traversal has been performed, the care-of address will not be equal to the source IP address. Similarly, when NAT traversal has not been performed, the care-of address will be equal to the source IP address. Thus, when the care-of address is equal to the source IP address, the Home Agent will recognize that NAT traversal has not been performed and vice versa. In this manner, the Home Agent may accurately recognize when NAT traversal has been performed, thereby enabling optimization functions to be performed by the Home Agent; hence checking whether the address is globally routable).

Consider **claims 5-7**. Bhagwat, as modified by Leung and Takusagawa, teaches claim 1; and Bhagwat further discloses sending the message before establishing connection between the mobile entity and the first network access entity (see Bhagwat: col. 8 lines 65-67, col. 9 lines 1-5).

Consider **claim 8**. Bhagwat, as modified by Leung and Takusagawa, teaches claim 1; and Gregorio further discloses IP address mapping (see Gregorio: par. 0082).

Consider **claims 10, 11, and 13**. Bhagwat, as modified by Leung and Takusagawa, teaches claim 1; and Bhagwat further teaches proxy related functions (see Bhagwat: col. 5 lines 12-25).

Consider **claim 12**. Bhagwat, as modified by Leung and Takusagawa, teaches claim 1; and Bhagwat further discloses identification functions (see Bhagwat: the abstract, col. 11 lines 34-37).



4. **Claims 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhagwat et al. (US 6651105 B1), hereafter "Bhagwat," in view of de Leung et al. (US 7599370 B1), hereafter "Leung,"

Consider **claim 14**. Bhagwat discloses sending a message including information for identifying a first network access entity from a mobile entity to a second network access entity, wherein the message is configured to enable the second network access entity to direct traffic destined to the first network access entity (**see col. 8 lines 65-67, col. 9 lines 1-5, col. 10 lines 43-47**); and handing over a connection of the mobile entity from the first network access entity to the second network access entity (see col. 5 lines 39-45, and col. 8 lines 64-67, where Bhagwat discusses handoff between access points).

But Bhagwat does not disclose or particularly refer to wherein a global address of the first network access entity is not known to the mobile entity.

Leung, in related art, discloses wherein a global address of the first network access entity is not known to the mobile entity (*global address read on public address - see col. 7 lines 45-50, where Leung discusses enabling a Mobile IP session to be established between a Mobile Node that has roamed to a private network and its Home Agent, wherein the Mobile IP session may be established even though the care-of address is a private address rather than a public address, hence the mobile node not knowing the visited private network or foreign agent public address, since the mobile node communicates from the private network to the outside -public or global network domain- when the assigned private network*

**care-of address is subjected to a Network Address Translator (NAT) traversal -see also col. 3 lines 53-59).**

Therefore, it is obvious that a person of ordinary skill was aware that a global address of a first network access entity not being known to the mobile entity, as taught by Leung, was of common knowledge in the art at the time the invention was made, and would have it included in or applied to the claimed invention, or combined it with Bhagwat's teaching, thereby providing means for the purpose of carrying out, and maintain in an optimum manner, a Mobile IP session that could be successfully and efficiently established from a Mobile Node via a private IP address without requiring modifications to the Mobile Node or the encapsulation scheme for both the Mobile Node and the Home Agent, as discussed by Leung (**see col. 3 lines 43-49**).

Consider **claims 15, 16, and 18**. Bhagwat as modified by Leung teaches claim 14; and Bhagwat further teaches proxy related functions (see Bhagwat: col. 5 lines 12-25).

Consider **claims 17 and 23**. Bhagwat as modified by Leung teaches claim 14; and Bhagwat further discloses identification functions (see Bhagwat: the abstract, col. 11 lines 34-37).

Consider **claims 19 and 20**. Bhagwat as modified by Leung teaches claim 14; and Leung further discloses checking whether the address is globally routable (see Leung: col. 4 lines 7-16, where Leung discusses that mechanism enables a Foreign Agent to encapsulate a registration request packet with the Foreign Agent care-of

address in the source IP address field; and when NAT traversal has been performed, the care-of address will not be equal to the source IP address. Similarly, when NAT traversal has not been performed, the care-of address will be equal to the source IP address. Thus, when the care-of address is equal to the source IP address, the Home Agent will recognize that NAT traversal has not been performed and vice versa. In this manner, the Home Agent may accurately recognize when NAT traversal has been performed, thereby enabling optimization functions to be performed by the Home Agent; hence checking whether the address is globally routable).

Consider **claim 21**. Bhagwat as modified by Leung teaches claim 14; and Bhagwat further discloses handover functions (see Bhagwat: col. 3 lines 36-40, fig. 8).

Consider **claim 22**. Bhagwat as modified by Leung teaches claim 14; and Gregorio further discloses IP address mapping (see Gregorio: par. 0082).

5. **Claims 41, and 43-54** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy, III et al. (US 6018657 A), hereafter "Kennedy," in view of de Leung et al. (US 7599370 B1), hereafter "Leung."

Consider **claim 41**. Kennedy discloses an apparatus comprising a processor (gateway MSC [fig. 4, col. 10 lines 15-26]) wherein the processor is configured to process data related to sending a message including information to identify a first network access entity to a second network access entity, which enables the second network access entity to direct traffic to the first network access entity (Originating external device **18** communicates local message to a gateway MSC coupled to

originating external device; if the gateway MSC does not service destination messaging unit, the gateway MSC retrieves an identifier for the next MSC of destination messaging unit **14** from its database **34** [col. 10 lines 28-46]).

But Kennedy does not disclose or particularly refer to wherein a global address of the first network access entity is not known to the mobile entity.

Leung, in related art, discloses wherein a global address of the first network access entity is not known to the mobile entity (*global address read on public address - see col. 7 lines 45-50, where Leung discusses enabling a Mobile IP session to be established between a Mobile Node that has roamed to a private network and its Home Agent, wherein the Mobile IP session may be established even though the care-of address is a private address rather than a public address, hence the mobile node not knowing the visited private network or foreign agent public address, since the mobile node communicates from the private network to the outside -public or global network domain- when the assigned private network care-of address is subjected to a Network Address Translator (NAT) traversal -see also col. 3 lines 53-59*).

Therefore, it is obvious that a person of ordinary skill was aware that a global address of a first network access entity not being known to the mobile entity, as taught by Leung, was of common knowledge in the art at the time the invention was made, and would have it included in or applied to the claimed invention, or combined it with Kennedy's teaching, thereby providing means for the purpose of carrying out, and maintain in an optimum manner, a Mobile IP session that could be successfully and

efficiently established from a Mobile Node via a private IP address without requiring modifications to the Mobile Node or the encapsulation scheme for both the Mobile Node and the Home Agent, as discussed by Leung (**see col. 3 lines 43-49**).

**Claims 45 and 49-54** disclose the same subject matter as claim 41, therefore same rejection applies.

Consider **claims 43, 44, 46, and 47**. Kennedy as modified by Leung teaches claims 41 and 45; and Kennedy further discloses cellular registrations, call processing, and hand-off procedures (see Kennedy: col. 1 line 12-31).

6. **Claim 42** is rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy, III et al. (US 6018657 A), hereafter "Kennedy," in view of de Leung et al. (US 7599370 B1), hereafter "Leung," as applied to claim 41, further in view of Takusagawa et al. (US 20030225892 A1), hereafter "Takusagawa."

Consider **claim 42** as amended. Kennedy as modified by Leung teaches claim 41, but does not particularly refer to fast binding update.

Takusagawa, in related art, discloses fast binding update (see pars. 0110, 0111, and 0114).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Kennedy as modified by Leung and have it include fast binding update, as taught by Takusagawa, thereby providing means for the motivation avoiding packet loss during a fast handoff in a mobile communication system, as discussed by Takusagawa (see pars. 0042-0048).

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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**Hand-delivered responses** should be brought to

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Amancio González, whose telephone number is (571)

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270-1106. The Examiner can normally be reached on Monday-Thursday from 8:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Dwayne Bost, can be reached at (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Nghi H. Ly/

Primary Examiner, Art Unit 2617

AG/ag

June 11, 2010